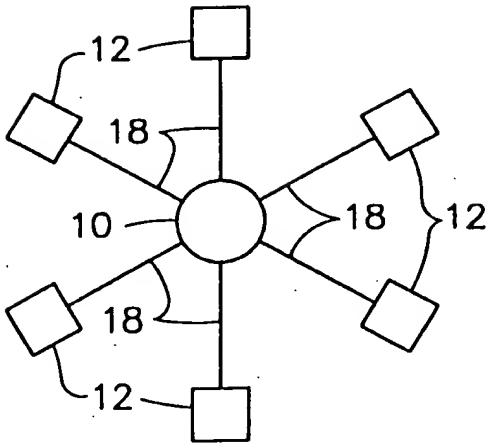

FIG. 1
(PRIOR ART)

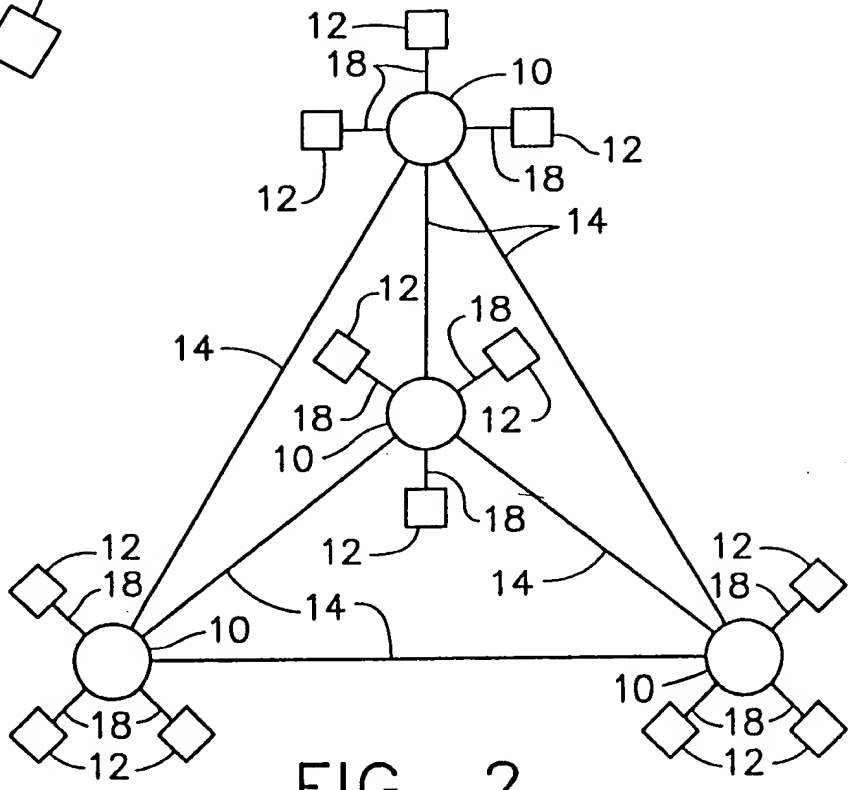

FIG. 2
(PRIOR ART)

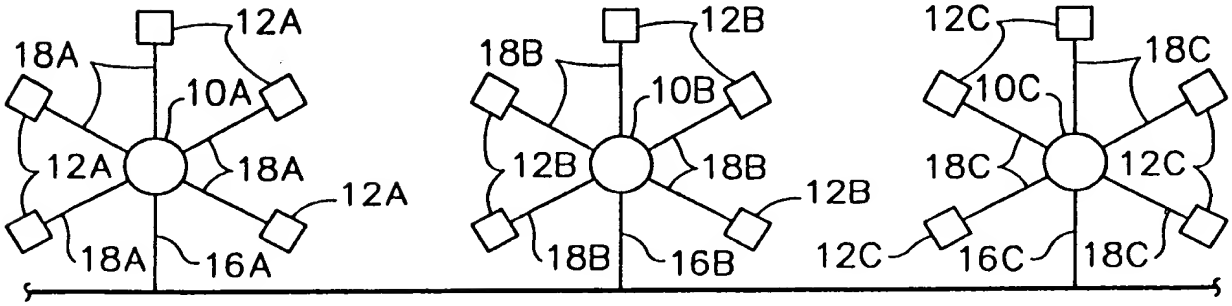

FIG. 3
(PRIOR ART)

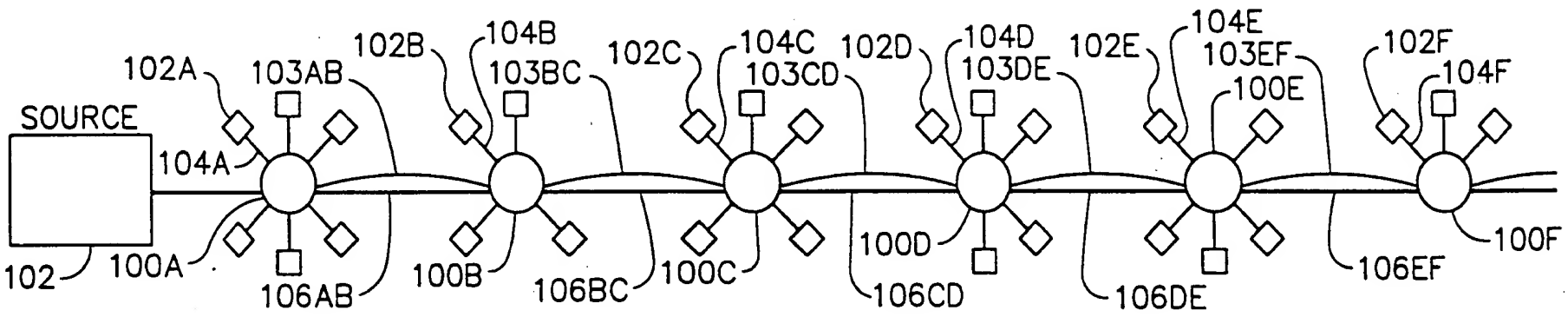

FIG. 4

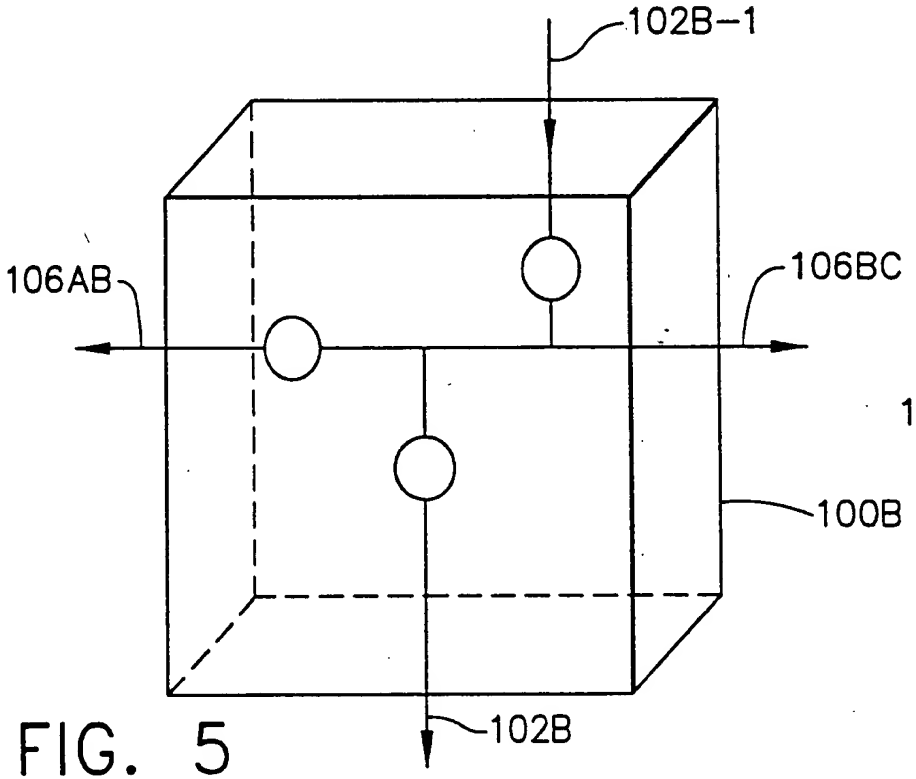

FIG. 5

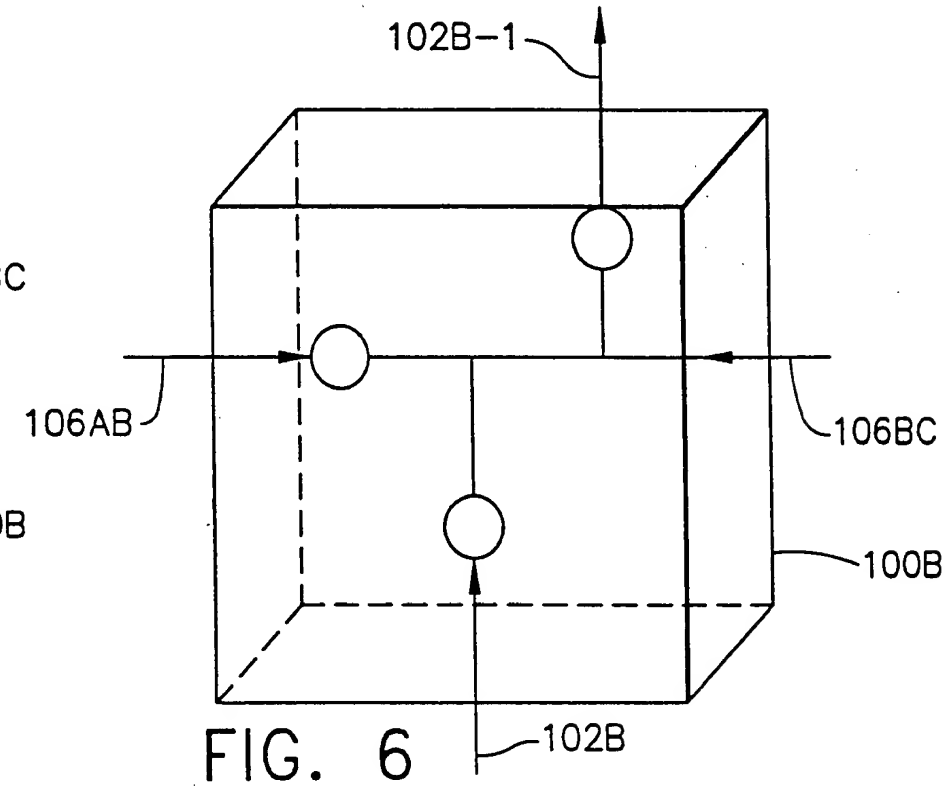

FIG. 6

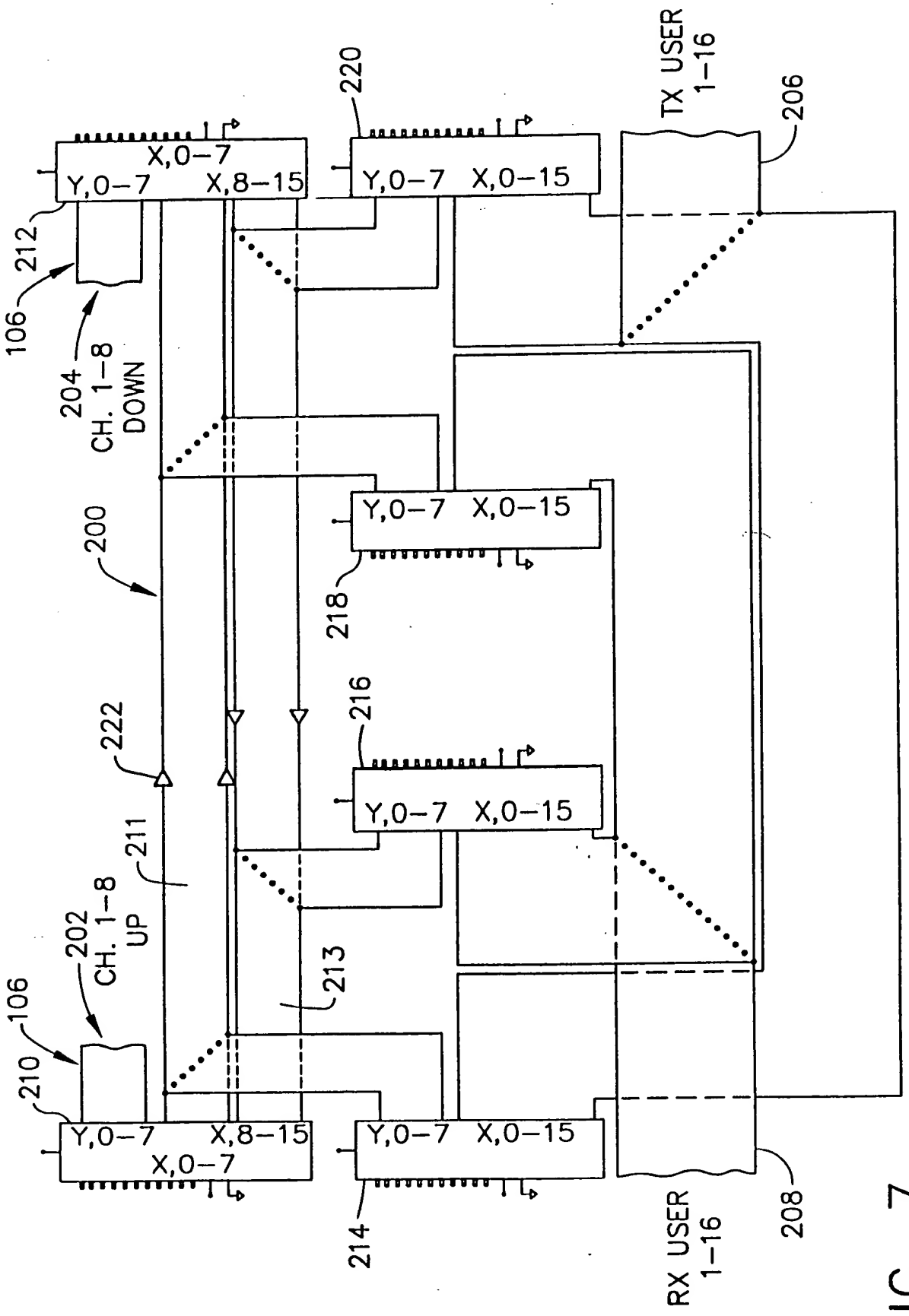
X,0–7
Y,0–7 X,8–15
220
Y,0–7 X,0–15
TX USER 1–16
206
212
106
204
CH. 1–8 DOWN
200
Y,0–7 X,0–15
218
216
222
Y,0–7 X,0–15
211
202
CH. 1–8 UP
213
106
210
Y,0–7 X,8–15
X,0–7
Y,0–7 X,0–15
214
RX USER 1–16
208

FIG. 7

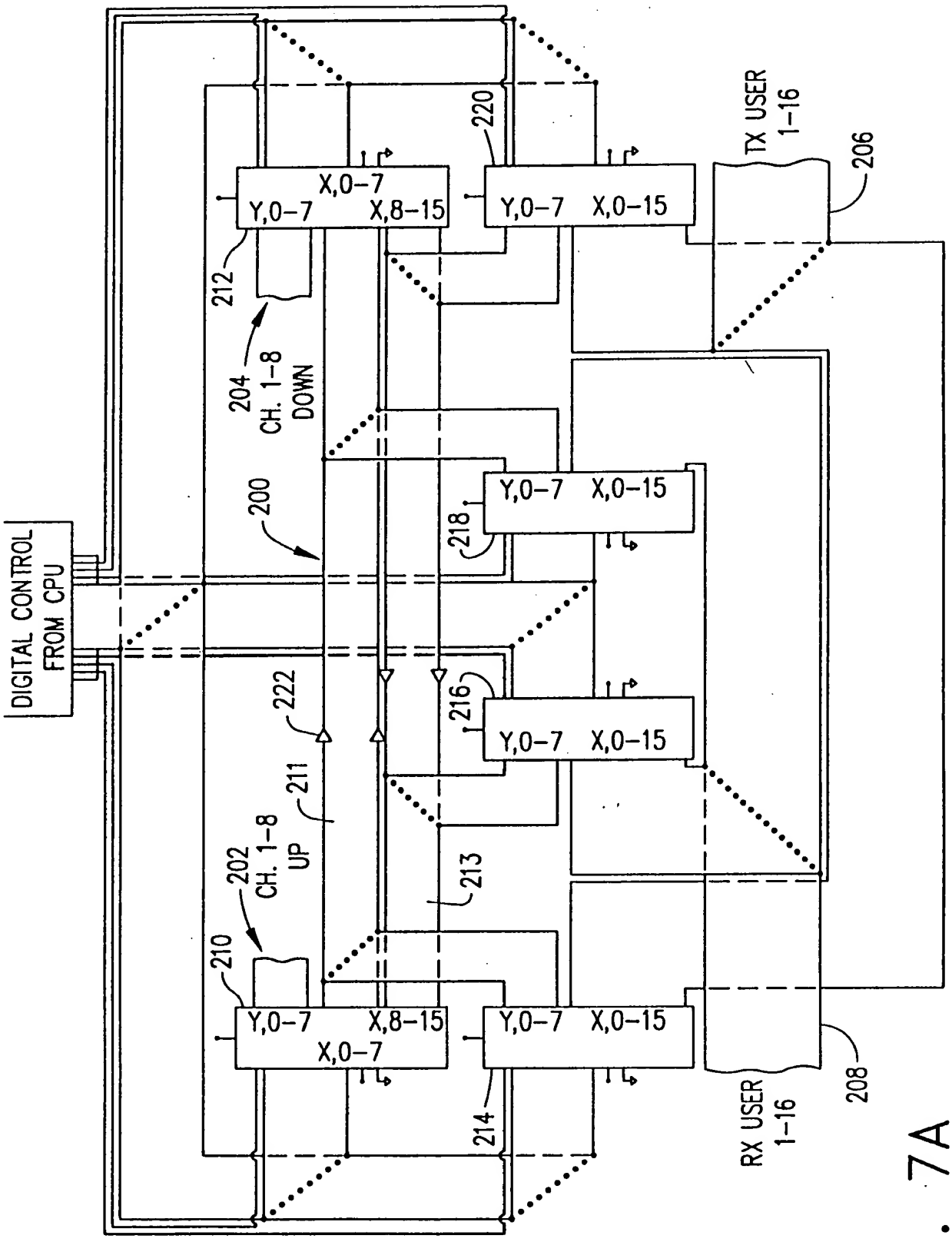
DIGITAL CONTROL FROM CPU
200
X,0-7
Y,0-7 X,8-15
212
204
CH. 1-8
DOWN
220
Y,0-7 X,0-15
TX USER 1-16
206
218
Y,0-7 X,0-15
222
216
Y,0-7 X,0-15
211
UP
202
CH. 1-8
213
210
Y,0-7 X,8-15
X,0-7
Y,0-7 X,0-15
214
RX USER 1-16
208

FIG. 7A

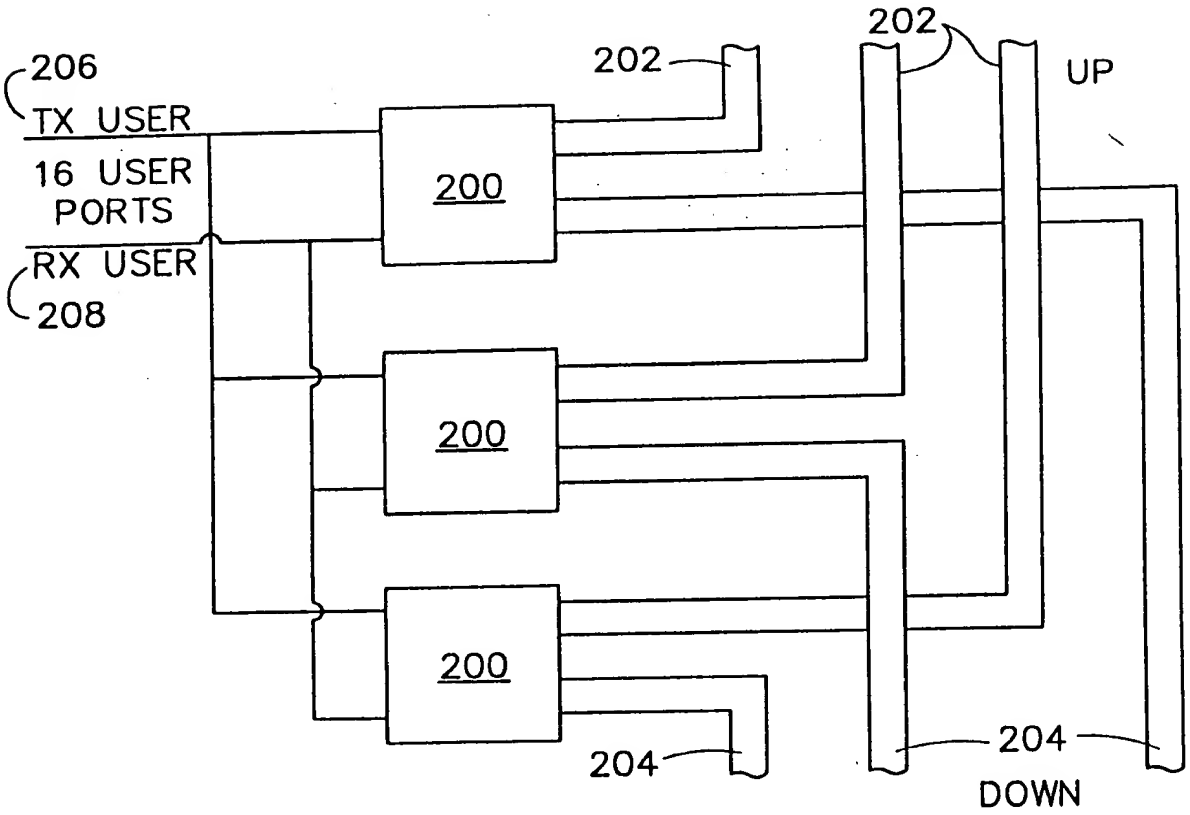
206
TX USER
16 USER
PORTS
RX USER
208
200
200
200
202
202
UP
204
204
DOWN

FIG. 8

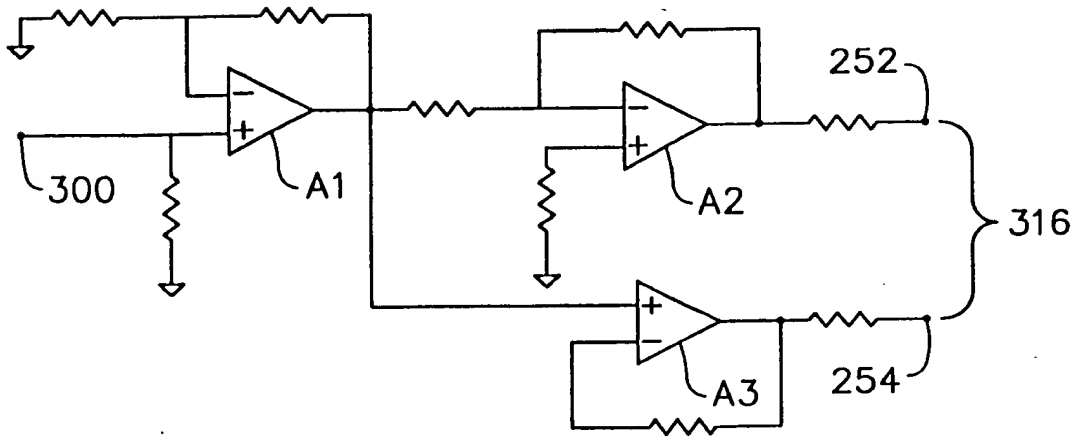
300
A1
A2
A3
252
254
316

FIG. 9

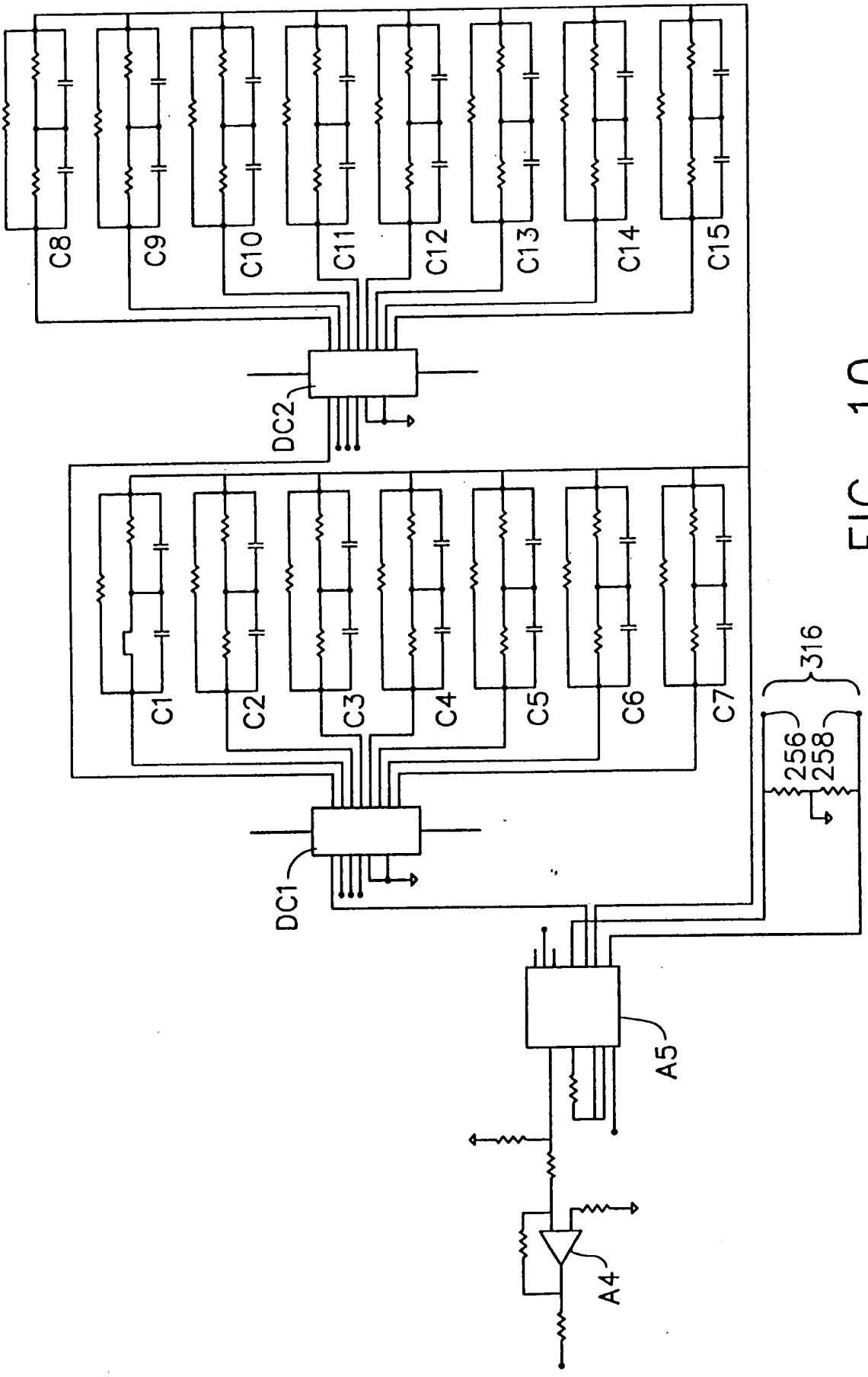
C8
C9
C10
C11
C12
C13
C14
C15
DC2
C1
C2
C3
C4
C5
C6
C7
DC1
316
256
258
A5
A4

FIG. 10

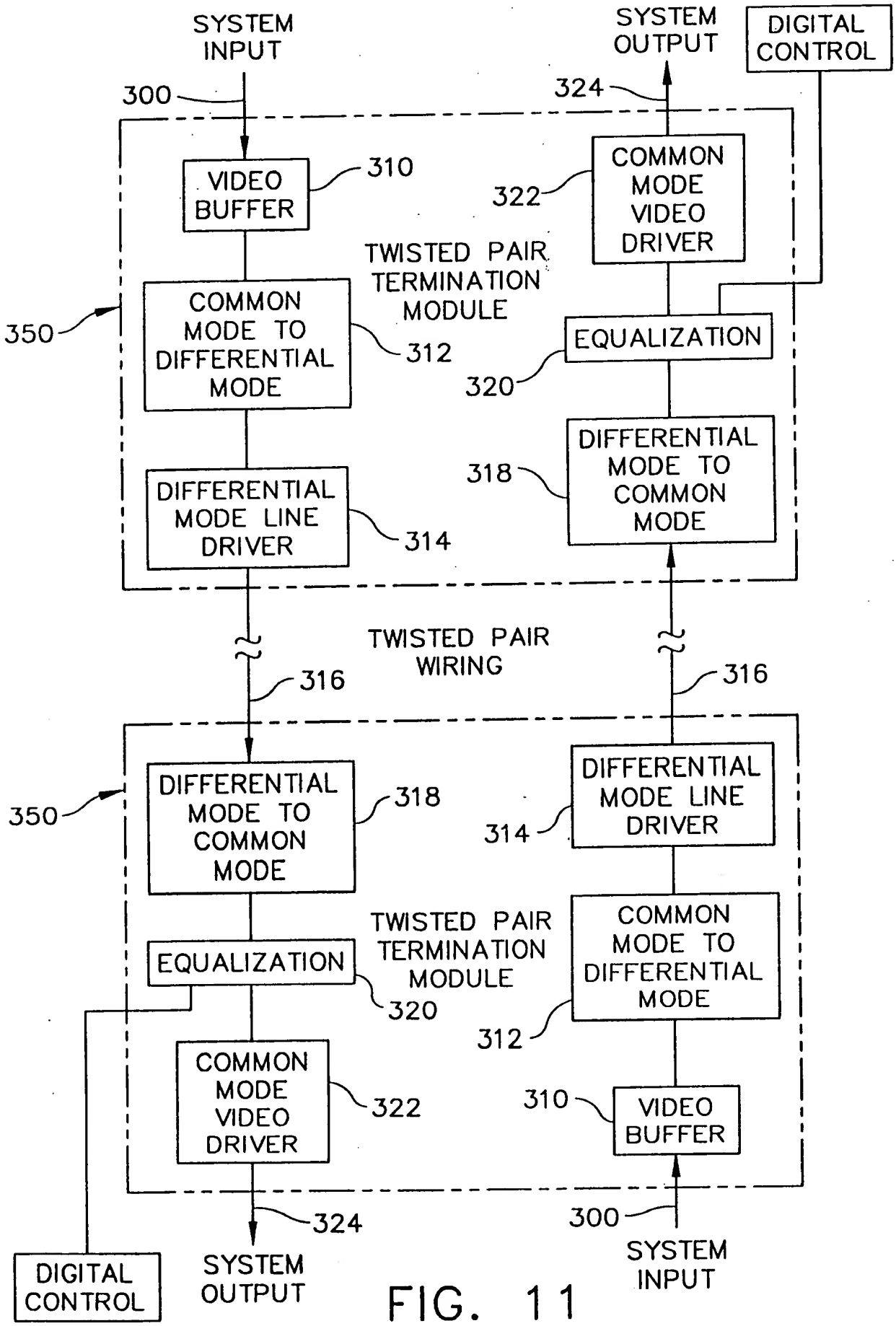
SYSTEM INPUT
300
VIDEO BUFFER
310
COMMON MODE TO DIFFERENTIAL MODE
312
350
DIFFERENTIAL MODE LINE DRIVER
314
TWISTED PAIR TERMINATION MODULE
TWISTED PAIR WIRING
316
DIFFERENTIAL MODE TO COMMON MODE
318
EQUALIZATION
320
COMMON MODE VIDEO DRIVER
322
324
SYSTEM OUTPUT
DIGITAL CONTROL

FIG. 11

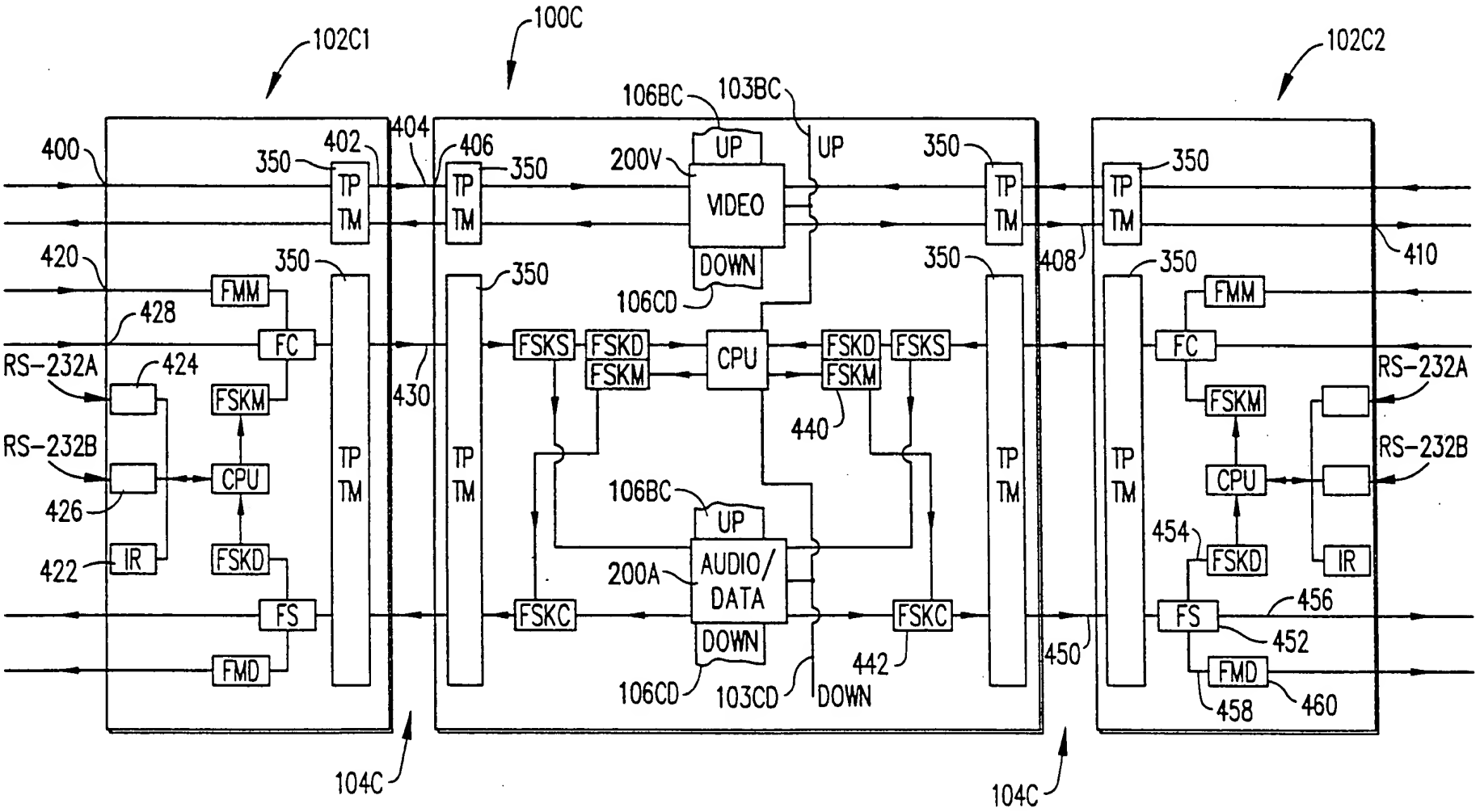
102C1
100C
102C2
106BC
103BC
UP
UP
400
350
402
404
406
350
200V
VIDEO
350
350
TP
TM
DOWN
106CD
420
350
350
350
408
410
FMM
428
FC
FSKS
FSKD
FSKM
CPU
FSKD
FSKS
FSKM
RS-232A
424
RS-232A
FSKM
440
RS-232B
TP
TM
TP
TM
TP
TM
TP
TM
RS-232B
CPU
106BC
UP
426
454
422
IR
FSKD
AUDIO/
DATA
200A
FSKD
IR
456
FS
FSKC
FSKC
FS
452
DOWN
442
450
FMD
106CD
103CD
DOWN
458
460
FMD
430
104C
104C

FIG. 12

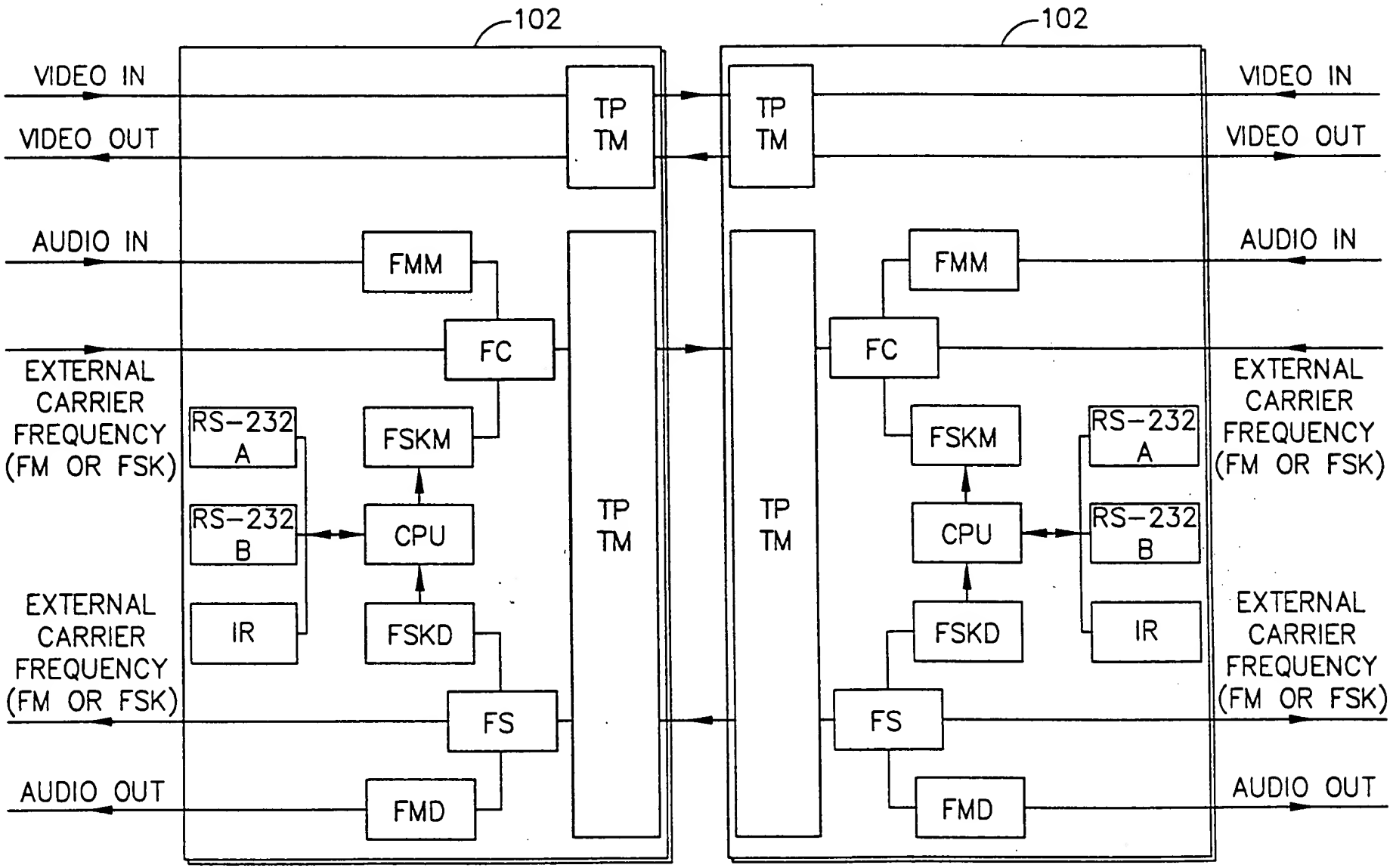
102
102
VIDEO IN
VIDEO OUT
AUDIO IN
EXTERNAL CARRIER FREQUENCY (FM OR FSK)
EXTERNAL CARRIER FREQUENCY (FM OR FSK)
AUDIO OUT
TP TM
FMM
FC
FSKM
RS-232 A
RS-232 B
CPU
IR
FSKD
FS
FMD
TP TM
TP TM
FMM
FC
FSKM
RS-232 A
RS-232 B
CPU
IR
FSKD
FS
FMD
VIDEO IN
VIDEO OUT
AUDIO IN
EXTERNAL CARRIER FREQUENCY (FM OR FSK)
EXTERNAL CARRIER FREQUENCY (FM OR FSK)
AUDIO OUT

FIG. 13